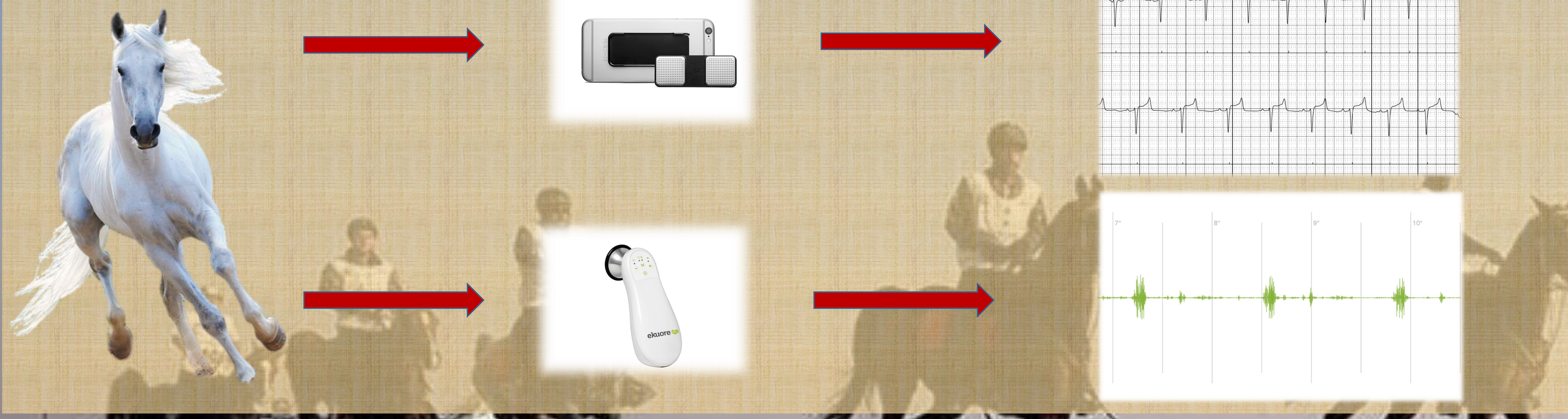


- Adrià Llas Roca -
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Objectives:

The prevalence of cardiac disorders in endurance horses has not been studied in detail. However, it has been shown that in 28% of “race-fit” thoroughbred racehorses, different kind of murmurs were described (Young 2008). Premature depolarization has been also described in 63% poor performance thoroughbreds racehorses tested on a treadmill (Jose-Cunilleras *et al.* 2006). The aim of this study is to find cardiac disorders in endurance horses during the race.

Material and methods:



Results:

Endurance horses which have been studied and classified among finished, moved off, eliminated (metabolic, lameness or both). Distance (km).

Distance	NºHorses	Finished	Ret.	Elim.	Metab.	Lame.	Met+lame
R 2x70	14	7	1	6	1	5	0
V 120	18	8	0	10	3	6	1
V 80	4	3	0	1	0	0	1
VII 40	1	1	0	0	0	0	0
VII 60	3	2	0	1	0	1	0
T 85	4	2	0	2	0	1	1
T 120	5	3	0	2	0	2	0
T 85	3	1	0	2	0	2	0
T 160	2	0	0	2	0	2	0
Total	54	27	1	26	4	19	3

Eliminated or non eliminated horses depending on the cardiac disorder suffered. *One out of three horses had premature ventricular complexes in two out of four stages. **One out of 2 horses had also ventricular premature complexes during the same race.

Horses groups	No eliminated	Eliminated
With cardiac disorder	9	6
Without cardiac disorder	18	21
Auricular fibrillation	4	2
Premature ventricular complexes	3*	2
Murmurs	2	2**

Endurance horses which have been studied and classified by the electrocardiography disorders (SR: Sinusal rhythm; Vent.Prem: Ventricular premature complexes; AF: Auricular fibrillation). Distance (km).

Distance	Nºhorses	SR	Vent.Prem.	AF	Vent.Prem+FA
R 2x70	14	8	3	2	1
V 120	18	17	0	1	0
V 80	4	4	0	0	0
VII 40	1	1	0	0	0
VII 60	3	2	1	0	0
T 85	4	3	0	1	0
T 120	5	3	1	1	0
T 85	3	3	0	0	0
T 160	2	1	0	1	0
Total	54	42	5	6	1

4 out of 54 horses with murmurs were identified during the race in one of the stages.

Distance (km)	Horses with murmurs
R 2x70	3
V 120	1
V 80	0
VII 40	0
VII 60	0

Conclusions:

- The prevalence of cardiac disorders (auricular fibrillation, ventricular premature complexes and murmurs) found in endurance horses in this study is 27.7%.
- Auricular fibrillation has been the most common heart disorder in the horses of the study (11.1%).
- None of the significant cardiac disorders were associated with the elimination from the race.
- Heart murmurs were found in 4 out of 54 horses of the study. All of them finished the race or were eliminated due to lameness.
- The possible association with athletic performance and cardiac disorders in this study deserve further studies.

Jose-Cunilleras E, Young LE, Newton JR, Marlin DJ. 2006. Cardiac arrhythmias during and after treadmill exercise in poor performing Thoroughbred racehorses. Equine vet J, Suppl. 36: 163-170.

Young LE, Rogers K, Wood JLN. 2008. Heart Murmurs and Valvular Regurgitation in Thoroughbred Race-horses: Epidemiology and Associations with Athletic Performance. J Vet Intern Med. 22: 418-426.